South African Mammals: A Short Manual for the Use of Field Naturalists, Sportsmen, and Travellers. By A. Haagner. Pp. xx + 248. (London: H. F. and G. Witherby; Capetown: T. Maskew Miller, 1920.) 20*s.* net.

THERE is no lack of works on the subject of African mammals. Some of them are of a purely sporting character; others appeal more particularly to the naturalist; Mr. Haagner's book on South African mammals claims to be a short manual for the use of field naturalists, sportsmen, and travellers.

No other country of equal size possesses so large and so varied a mammalian fauna as South Africa, and it is quite a feat to describe all the species occurring there in so short a compass, and to illustrate the text with more than 140 photographic reproductions. Some of the latter no doubt might, with advantage, have been omitted, as they give but a poor idea of the animals alluded to, and this would have left a little more room for the text. Many of the illustrations, however, are good, particularly those of the zebras.

The author, as he says in his introduction, has purposely adopted a more or less "note-book" style, and this has resulted sometimes in rather loose and inadequate descriptions. For example, all the information he can give us about the small grey mongoose is that it is a small edition of the grey mongoose, and about the same size as the slender mongoose. All naturalists must disapprove of the actions of what Mr. Haagner justly styles "game-butchers." It is therefore all the more surprising that he should reproduce as a frontispiece to his book a photograph of a heap of skulls, referred to as the hunting trophies of the "good old days."

As we should expect, the book appeals more directly to managers of zoological gardens and to dealers in livestock. The author's unsuccessful experiences in endeavouring to rear the young of Cape hunting-dogs are shared by many others. Only the Dublin Gardens have been more fortunate in their efforts, and have contrived to breed and rear the pups.

Letters to the Editor.

[*The Editor does not hold himself responsible for opinions expressed by his correspondents. Neither can he undertake to return, or to correspond with the writers of, rejected manuscripts intended for this or any other part of* NATURE. *No notice is taken of anonymous communications.*]

Communism and Science.

IN view of the article on "The Proletarisation of Science in Russia" in NATURE of September 1, the following extracts from a letter I have just received from a well-known Russian professor of chemistry may be of interest. I have omitted personal references and a few other matters. J. W. MELLOR.

Pottery Laboratory, Stoke-on-Trent,
September 5.

"You doubtless know the old adage, 'Primo vivere, deinde philosophari.' I do this last, but the first part, 'vivere,' is more than uncertain for us who have the misfortune to be a little civilised, as one never knows what our wild, wild taskmasters are going to do next. The higher schools of Petrograd are under the control of a former apprentice of the dockyards of Cronstadt, who has learned to talk glibly and to sign his name with an appropriate flourish. He has not the remotest notions as to what is a seat of high learning; but that does not trouble him in the least, he just governs according to his lights, and actually does his best to destroy all culture, all real science, in our institutes. It is just the same everywhere, and the results are glaringly apparent in the utter failure of crops in the east and south of Russia, due not so much to exceptional climatic causes as to the countless requisitions of 'surplus' wheat, 'surplus' bullocks and horses, and other kindred measures of the reigning proletariat. The population of some twenty provinces, which supplied once upon a time almost all Russia with bread and exported thousands of tons of wheat to foreign lands, is now leaving their houses and fleeing to the east, the north, and the west of Russia, where there is still something to eat; they spread desolation wider and wider—also cholera and other diseases; tens of thousands perish daily. Almost nothing is left in the devastated provinces; they must now be colonised anew. We are fortunate for the nonce in being sufficiently far from these places, but the outlook for us is anything but reassuring.

"Up to now we receive a 'ration of scientists,' which during 1920 was comparatively good, but is now reduced to the following items, received, for instance, in June:—14 lb. of bread (made principally out of soya beans); 11 lb. of soya beans (it is not generally known that they contain poisonous constituents, and many were the cases of poisoning); 19 lb. of herrings; 4 lb. of tallow (the first fatty substance received since February); 9 lb. of wheat (we eat it boiled in the form of gruel); 3 lb. of macaroni made out of soya beans; 1 lb. of salt; $1\frac{1}{4}$ lb. of sugar; 3 lb. of lean pork —bones and hide, no lard, and very little meat; $\frac{1}{4}$ lb. of tea (surrogat); $\frac{3}{4}$ lb. of tobacco; some matches; and 1 lb. of washing soda (there is no soap). During the same month I received—only a few days ago—as salary for my lectures, etc., the stately sum of 21,000 roubles; but as bread costs about 4000 roubles and butter 30,000 roubles per lb., this sum is the equivalent of 5 lb. of bread, or some 20 kopeks (=5*d.*) of pre-war days. You will thus appreciate the munificence of my salary; the meanest mechanic or plumber gets from 250,000 to 500,000 roubles and more monthly, and it is nothing unusual to pay 1 lb. of bread or 5000 roubles for one hour of manual work, whereas I, as a full-fledged professor and doctor of chemistry, receive for one hour of lecture 450 roubles. Consequently, to nourish the members of the family (I have, fortunately, neither wife nor children, but live with my old mother), I work in kitchen-gardens, sell the few things that are still left, etc. The prices for a new suit range up to 1,000,000 roubles; a pair of old high boots, which I could not wear and which cost originally some fifteen years ago 14 roubles, fetches now 700,000 roubles, as boots are very scarce; for a shirt you get 2 lb. of butter. During the first six months of 1921 my mother and I have eaten different foods to the value of about 6,000,000 roubles.

"Needless to say that, in spite of these millions, we are now paupers in the strict sense of the word. All my savings, made little by little during more than twenty-five years of professorship, were placed in State loans and annulled in 1917; our small landed estate not far from Petrograd was taken from us in 1918, and is now completely devastated, all the woods having been cut. It would be now utterly impos-

©1921 Nature Publishing Group

sible to exist without the 'ration of scientists,' meagre as it is. I read in NATURE in 1920 a notice on the voyage of Mr. Wells to Petrograd and his opinion on the position of our men of science (NATURE, vol. 106, p. 352). He did not see much, as he was 'personally conducted,' and does not understand Russian. He estimates the number of men of science at four thousand; NATURE expresses some astonishment at this number—thinks there must be less, as many have died. Well, there is here an official commission, composed of Mr. Oldenburg and other learned gentlemen, who decide whether an applicant is a man of science or not. As it is often a question of life and death, the decision is usually in favour of the applicant, if certain formalities are fulfilled—if he has printed some learned articles, or even simply written one, etc. Professors are almost always included if they teach in higher schools. There are now very many proletariat "higher institutes"; for instance, a "Higher Institute of Anti-fire Technique" and a "Higher Institute of Plastic Arts"; the first turns out firemen for fire brigades, the second—dancers! "Professors" of these institutes are also "scientists"! Even among the professors of old high schools there are now some without scientific degrees called "red professors"; for now it is decreed that anybody can be a professor, just as anybody who is sixteen years of age can be a student. If he is quite ignorant he will attend a "preparatory course," but, like real students, will receive his ration and salary (students do not *pay* anything now, but receive salaries).

"Thus the question, 'What is a man of science?' is not so simple as it seems. The number of men of science would certainly exceed the four thousand of Mr. Wells if the Soviet of deputy workers and deputy red soldiers did not happen to fix the number of rations at two thousand. Of course, all this is very detrimental to the interests of real scientific workers, whose number, I should think, does not exceed several hundred; the more so as it is officially announced that scientific workers of England, France, and the U.S.A. have formed committees to help us. It would be a good thing if some representatives of these committees could come and preside over the distribution. Last year the Norwegian Government sent us a lot of presents, but the precise amount sent was carefully kept in the dark, so that we have more than a suspicion that we received only a part of the alms—and then only some coarser things, like herrings and cod—and that the dainties were taken by other parties for whom they were not intended.

"You see I write as a matter of course about receiving alms; we have long ago lost all sense of pride—beggars cannot be choosers—and we can only thankfully accept foreign help. As I express myself easily in English I could not resist the temptation to give to you just a very small epitome of what is meant by 'vivere' for us, but there are many other not very agreeable things which I cannot mention now. In spite of them, the habits of twenty-five years cannot be given up, and I still interest myself in the process of chemistry. . . .

"I have read over what I have written on the subject of 'primo vivere, deinde philosophari,' and see that there is enough unintentional humour about it—but there is precious little humour in living it through."

The Disaster to the Airship R38.

IN the article on "The Disaster to the Airship R38" in NATURE of September 1, the author laments that, in consequence of it, airship development is to be abandoned by our Government, and airship design is referred to as being a matter of experience and guessing. In face of the general tenor of the article, it may be of interest to direct attention to six letters published in *Engineering* in November and December, 1901, which I wrote in a discussion of the torpedo-boat destroyer *Cobra*. Those letters are as applicable to the R38 as to the *Cobra*.

Some eminent scientific men then denied the possibility of the disaster to the *Cobra* being due to gyroscopic action of the propeller and engines; and the first of my letters was written merely to insist on the existence of such action, though I declared that I could not consider it sufficient to account for such an accident. The course of the discussion, however, led me to declare it to have been the sole cause of the disaster.

The important point is that all then existing destroyers had engines fitted into them after the ship had been built. I pointed out that such engines should be built with the bearings as an intrinsic part of the engines and extending the full length and breadth of the ship, and also strong enough to resist any force that could be exerted by the engines. I considered that a vessel and engines so constructed would not only be safer, but might also be lighter than one dependent on heavy plates and girders for strength to stand the stresses created by pitching and rolling.

By giving the airship's engines such bearings as above suggested it may be made safe against any such accident as that which has wrecked the R38.

The old destroyers offered, perhaps, more scope for saving weight than the airship, but by giving such bearings to the engines as above suggested at least three-fourths of the present weight of girders might be dispensed with. WM. LEIGHTON JORDAN.

Royal Societies Club, September 3.

BEFORE dealing with the main contention of Dr. W. Leighton Jordan's remarks on the loss of R38, it is desirable to refer to the opening paragraph and to correct the impression that, "in consequence of it, airship development is to be abandoned by our Government." The policy of the Air Ministry was determined and announced many months before the accident, and therefore cannot have been influenced by the failure of R38. The campaign for economy in the public service, combined with a lack of enthusiasm on the part of the Air Council, is much more likely to be the explanation of the decision to abandon airships.

Dr. Jordan appears to attach much importance to gyroscopic action in relation to the breaking of R38. Such action is called into play when the airship turns, and, as is well known, the magnitude of the couple is proportional to the rate of turning of the ship. There is little difficulty in estimating the magnitudes of the forces to be resisted, and, since an airship turns slowly, in seeing that they are relatively small. It is not usual for engineering structures to fail against well known loads, and there is no reason to suppose that R38 is an exception. It is rather to those unknown effects supposed to be covered by a "factor of safety" that attention is drawn by failure. The less the scientific and technical preparation for construction, the greater the call on the allowance for ignorance. The scientific objection to full-scale tests to destruction is not to their effectiveness, but to their cost in life and material; they are, in fact, the result of false economy.

THE WRITER OF THE ARTICLE.

©1921 Nature Publishing Group